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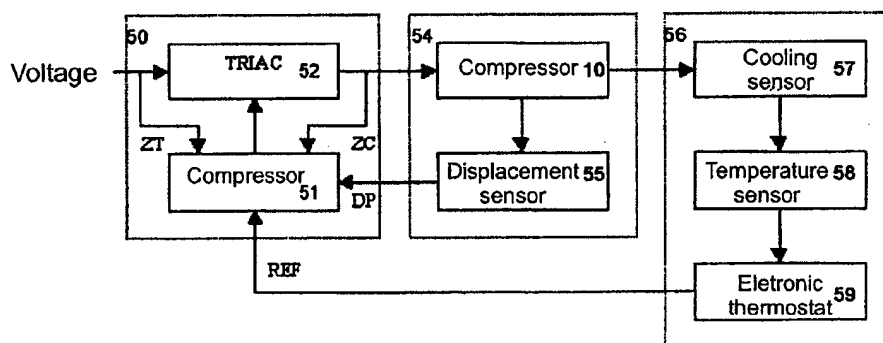
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(54) Title: A LINEAR-COMPRESSOR CONTROL SYSTEM A METHOD OF CONTROLLING A LINEAR COMPRESSOR A LINEAR COMPRESSOR AND COOLING SYSTEM



(57) Abstract: The present invention relates to a system of controlling a piston in a linear compressor, a method of controlling a piston in a linear compressor, as well as a linear compressor, particularly applicable to cooling systems that may include, for instance, refrigerators, air-conditioning systems and the like. The objectives of the present invention are a system for controlling a linear compressor (10), the linear compressor (10) comprising a movable assembly (1), a motor (1) fed by an application voltage (V_T) generating a current circulating in the motor (1), an electronic switching device (52), and an electronic circuit (51) controlling the electronic switching device (52) to control the application voltage (V_T) applied to the motor (1), and the motor (1) driving the movable assembly (1), the electronic circuit (51) measuring an actuation phase (ϕ_c) of the current circulating in the motor (1) and a dynamic phase (ϕ_p) of the movable assembly (1) and establishing a relationship between the actuation phase (ϕ_c) and the dynamic phase (ϕ_p) determining a measured phase (ϕ_{pc}), the electronic circuit (51) obtaining a value of a correction voltage (V_F) from the value of the measured phase (ϕ_{pc}), the electronic circuit (51) obtaining a value of a defined voltage (V_p) from a physical position (DP) of the movable assembly (1), the electronic circuit (51) actuating on the value of applied voltage (V_T) from the sum of the correction voltage (V_F) and the defined voltage (V_p). A method of controlling a linear compressor, a linear compressor and a cooling system are also objectives of the present invention.

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